Standard Operating Procedures for Sampling and Analysis of Hazardous Materials

Louisiana Department of Environmental Quality
Office of Environmental Compliance
Surveillance Division

Revision 2

Document Owner:

Wayne Desselle, OEC, Surveillance Division — Date: 3/17/04

Approved by:

Phyllis Luke, OEC, Surveillance Division — Date: 3/16/04

Please Note: The official version of this document is maintained on the LDEQ Intranet. Copies, whether in electronic or printed form, are not official and should be verified as current against the official document on the Intranet. The Control Header of the SOP will be used for comparison to the official document.

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Document Review and Revision Record

Note: Actions older than 5 years may be removed from this record

Approval Date	Revision No.	Record of Activity
9/15/2000	0	Initial version of this SOP was an appendix of the RCRA QAPP. The original title was "Appendix IV, Field sampling Standard Operating Procedure".
12/12/2001	1	• Document format was changed. • Title changed to reflect that SOP was no stand-alone procedure. • Sampling procedures updated.
3/17/2004	2	Format change to document. Minor Changes to sampling procedures.

Table of Contents

1.0 Purpose and Applicability

This sampling plan is a guidance document to assist LDEQ personnel in obtaining samples that are representative and defensible. Each sampling situation must be evaluated on the relevant circumstances of the sampling event. It is the responsibility of the lead inspector and/or sampler to determine the appropriate course of action for that particular situation. These actions at a minimum must be based on LDEQ policies and procedures. **Above all, the safety of all personnel involved must be first and therefore most important factor!**

2.0 Description of the Process

2.1 Sample Objective

Samples are a chemical photograph of what is observed during an inspection. Like a photograph, sample analysis provides a picture of the chemical composition of a material. If performed appropriately sample analysis provides strong supporting evidence, but should never be the sole source of evidence to prove a violation. The inspector should obtain from the facility representative as much information as possible about the material to be sampled, prior to obtaining the sample. This information should include, but not be limited to:

2.1 How does the facility describe the material?
- 2.1.1. Product, co-product, or by-product
- 2.1.2. Waste

2.2 How and where was it produced or generated?
2.3 How long has it been at the facility?
2.4 How much of the material has been used/processed since the facility received the material?
2.5 Is it homogenous or phased?
2.6 What does the facility intend to do with the material?
2.7 How does the facility manage the material?

- What are the storage conditions?
  - Open container
  - Open top tank
  - Surface impoundments
  - Piles

- Is it treated?
  - Stabilization
  - Dilution

- Heating
- Some other means

This information must be documented in the inspector's field notes and transferred to the inspection report.

The inspector determines the sampling objectives for each sampling event. These include:

- Confirm that a device (drum, tank, waste pile, etc.) contains hazardous waste.
- Confirm that a hazardous waste has been spilled and/or disposed.
- Confirm that a hazardous waste placed on the land does or does not meet the appropriate LDR (Land Disposal Restriction) treatment standard.

In most cases the sample objective is to provide supporting evidence for a pending enforcement action or to determine if the waste is not hazardous or to determine if above RECAP Screening Standard and further action is necessary.

2.2 Sample Strategy

Sample strategy is based on the sample objectives. The strategy should ensure that samples are representative of the material to be sampled and will provide the necessary information to achieve the sample objectives.

- Facility personnel may conduct sample collection. In some cases the facility may agree to collect the samples themselves. This may be the case when the device to be sampled requires special sampling equipment or when Department personnel wish to observe the facility's sampling techniques.
- Samples must be taken by qualified staff and collected according to approved protocols between the facility and LDEQ. Qualified staff is defined as a staff having attended the EPA Sampling for Hazardous Materials Course or equivalent. Sample strategy must describe how spilt samples will be collected.
- Monitor sampling activities carefully and record your observations. Make sure sampling collection techniques do not allow for the loss of volatile constituents. Make sure sampling equipment and containers used by facility are certified clean. A rinsate sample may be taken if deemed appropriate. LDEQ's spilt must be placed into certified clean sample containers received from the Laboratory Services Division or the contract laboratory. The spilt must be managed according to the procedures outlined in this SOP such as sealing sample containers with evidence tape, preparing chain of custody,

and preserving samples with ice and/or chemical preservatives, etc. Before leaving the facility, obtain facility's concurrence that they believe the samples are representative of the material sampled. Document the facility's statement on the Field Interview Form (FIF) and in the field logbook or notes. Provide facility with receipt of the split sample. A copy of the Chain of Custody is a sufficient receipt.

2.2.1 Grab Samples

Grab samples are to be taken from each target material or vessel. Sample collection is to be performed in accordance with Section 9.0 of this SOP. In some case, composite sampling may be employed as described in Section 2.2.2.

2.2.2 Composite samples

Composite samples should consist of only like materials. These samples consist of several grabs, which should be consistent in nature based on visual observation and field screening. Composite sampling should be done discretely so as not to dilute the sample, prevent the mixing of incompatible materials. Composite sampling is most commonly used when sampling waste piles and spill areas to determine if it is hazardous. Composite samples should not be taken from distinctly different materials. For example do not composite different phases of a multi-phase material stored in large vessels. Each phase should be sampled and analyzed separately and the results compiled. In some cases, samples may be composited at the laboratory in order to minimize the loss of volatile constituents. Such compositing may be desired when sampling top, middle, and bottom of a large tank and each individual sample appears to be consistent in nature (i.e.- single-phase material). Clear instructions to the laboratory are essential.

3.0 Determining the Number of Samples To Be Collected

A sufficient number of samples should be collected to adequately document the violation/situation observed. For example when investigating a discharge from a vessel, both the vessel and the contaminated media should be sampled in addition to QA/QC samples. Detailed field screening can reduce the need for taking numerous samples.

4.0 Analytical Methodologies

Analyses selected should identify the target material as completely as possible. These

analyses should determine if the target material is a listed and/or characteristic hazardous waste. Analyses to be performed will be determined on a case-by-case basis. Field screening can aid in determining the appropriate analyses to be performed. For example the use of a pH meter or pH paper can determine if corrosivity analysis should be requested. A organic vapor analyzer or Combustible Gas Indicator (CGI) is used to determine if ignitability should be requested. Oily materials, such as used oils, suspected of having been mixed with a hazardous waste should be analyzed for total VOA (CPL method), Toxicity Characteristic Leaching Procedure-Volatile Organic Analysis (TCLP-VOA), TCLP metals, ignitability, and PCBs.

For example, samples of contaminated soils should be analyzed for total metals and compared to total metals analyses of a background sample. TCLP metals analyses may be performed on the contaminated soil sample, if the analysis of the contaminated soil is near twenty times higher than background. Semi-solids samples may require the paint-filter test to determine if any free liquids are present

5.0 Pre-sampling Evaluation

Personal protection and safety equipment needs must be considered before every sampling event. All personal protection equipment should be inspected to ensure that it is working properly prior to any sampling event. Proper personal protection is determined based on information received by the inspector from:

- Air monitoring of the area and materials.
- Information provided by the facility.
- Historical information concerning the types of operations that have occurred at the facility.
- LDEQ files

Entry into a van or box trailer holding containers of materials to be sampled should be done only if absolutely necessary. Extreme caution must be employed. It is preferable to have facility personnel remove the container to be sampled from the van or trailer prior to sampling. When sampling unknown materials at unknown concentrations or when sampling known constituents at unknown concentrations, Level B Protection or higher must be used. Air purifying respirators should be used when concentration levels of the hazardous constituents are known.

REMEMBER NO SAMPLE IS WORTH LOOSING YOUR LIFE OR HEALTH. WHEN IN DOUBT, DON'T GO IN! ALWAYS FOLLOW PERSONAL PROTECTION GUIDELINES AS REQUIRED BY OSHA 1910.120.

6.0 Sample Material Selection

Select the material to be sampled based on which material is more likely to provide evidence to support the suspected or alleged violation. Information to be considered when making this decision should include:

- Field screening
- Information obtained from the facility representative.
- Labels and markings on individual containers, tanks, etc,
- Visual observation
- Historical information such as past violations, spills, explosions, etc.

Carefully document which materials are to be sampled and assign a sample I.D. number to each sample. Document in the field logbook the location of each sampling station and any identifying markings, labels, and/or numbers unique to the item (drum, tank, etc.) to be sampled. Photograph and/or video tape the area and the material to be sampled. Spray paint the sample number or a reference number on each container or use tags. For tanks and larger vessel use the facility's assigned number or description to identify the vessel. For soil sampling, flags may be used to identify the sampled site. After marking each device to be sampled, photograph the item with the markings displayed.

Determine, which analyses are to be performed on each sample. Analyses will be based on all information obtained during the inspection. Analyses should be chosen in an effort to detect all hazardous waste constituents that might be present and any hazardous waste characteristics the material may exhibit.

Determine the sample collection method and equipment to be used. Select appropriate sample containers based on materials, matrices, and analysis to be performed. All sample containers must be certified clean. Use only clean sealed containers obtained from Laboratory Services or contract laboratory. Make sure container lids are still on tight. Use appropriate sample container size and type for the analysis being requested. If samples are being analyzed by a contract laboratory, additional information can be obtained from that laboratory.

7.0 Sample Station Evaluation

Determine any potential physical hazards and or health and safety considerations that may arise during sampling activities. Hazards to be aware of include:

- Sharp objects that may damage equipment or injure personnel:
  - Cut or damaged drums, steel rods, tin, pieces of scrap metal.
  - Broken pallets, lumber with exposed nails.

  - Broken glass.
- Snakes and wasps.
- Heat stress.
- Drums and other objects, which are stacked very high or haphazardly.
- Electrical hazards.

Determine any potential chemical hazards associated with the area and/or materials to be sampled. Chemical hazards to be aware of are:

- Bulging drums
- Fire hazards
  - Chemical reactions caused by mixing incompatible materials.
  - Fire or explosion ignited by sparking from equipment or opening containers.
- Chemical emissions
  - Sampling area.
  - Materials to be sampled.

8.0 Sample Station Preparation

Stage the sample station to assure safe access and working conditions. Remove debris that may cause injury or damage personal protective clothing or equipment. Obtain the necessary equipment for safe access to tanks, impoundments, pits, etc. Identify each sample station and double check field log notes to ensure that identification description matches the assigned sample ID number. Label each sample container with the following information:

- Sample ID number
- Date and time of sample collection
- Analyses to be performed
- Preservative (if used)

Provide absorbent material at each sample station to collect incidental spills from sampling equipment. Assemble sample equipment and set up decontamination station.

9.0 Sample Collection Methods

9.1 Sampling Rules

General rules that apply to all sampling events:

9.1.1 When possible always work in a buddy-system. Single person

sampling is difficult to do.

9.1.2 Record in field logbook or field notes any observation noted such as layering, color, odor, viscosity, etc. of material to be sampled. Note any other significant observation such as dead vegetation, stained soil, or oily sheen on surface water.

9.1.3 Collect a rinsate sample from sampling equipment prior to using the equipment and after decontamination, as necessary.

9.1.4 For all volatile organic analyses, there should be zero headspace (no bubbles in liquids, no free space in sludges, solids or soils).

9.1.5 Keep sample containers closed when not adding material to the container in order to prevent cross contamination and escape of volatile organic compounds.

9.1.6 Samples to be tested for ignitability should be taken with little to no headspace in the sample container.

9.1.7 Decontaminate sampling equipment between sampling stations or pre-cleaned equipment.

9.1.8 Remove any residue from the outside of each sample container and seal container with evidence tape. Place the sample container into a re-sealable storage bag (zip-lock bag) when possible to prevent cross contamination.

9.1.9 All samples must be physically preserved in ice to 4ºC ± 2ºC. Do not use blue ice except when it is the only type of ice available. The blue ice should be replaced with regular ice as soon as possible. Use plenty of ice. *Note: It may be 24 to 36 hours before the sample reaches the laboratory.*

9.1.10 Complete chain of custody form, "Louisiana Department of Environmental Quality-Chain of Custody". A copy may be provided to facility as a receipt for sample. A copy of the department's COC is included as Attachment 1

9.1.11 A field blank sample should be taken at each sampling event when necessary.

9.1.12 Chemical preservatives shall be utilized during the sampling process where appropriate. Typical chemical preservatives for samples (rinsate and field blank):

- HCL - VOAs
- HNO_3 - Metals
- NaOH and Zinc Acetate – Sulfides

9.2 Container Sampling (Liquids and Semi-solids)

9.2.1 Use non-sparking tools when opening a bung or lid slowly in case the container is under pressure.

9.2.2 Insert coliwasa into drum slowly until it reaches the bottom of the container.
9.2.3 Seat plunger into the bottom of the coliwasa and remove from the container.
9.2.4 Slowly place contents of coliwasa into sample container and close lid immediately.
9.2.5 Repeat procedures until sufficient volume has been collected.
9.2.6 A drum thief or inverted coliwasa without the plunger may be used to obtain thick sludge sample in the bottom of a container that primarily holds liquids.

Note: Extremely large containers such as a barge or portable tote should be sampled according to Tank Sampling Protocols. (See section 9.4)

9.3 Container Sampling (Solids)

9.3.1 Solid samples may be obtained from a container by use of a soil tier or auger sampler.
9.3.2 When possible attempt to bore down to the bottom of the container. You may find that the solids are merely floating on top of free-liquids.
9.3.3 In the event that it is impossible to bore to the bottom of the container, attempt to bore as deep as possible. When sampling for volatile compounds it is essential to collect material at least 2 to 4 inches below the surface of the material in the container. Solid samples collected for volatile organic analysis should be minimally disturbed during collection and transfer to the sample container to minimize lost of volatile organic compounds.
9.3.4 Repeat procedures until sufficient volume has been obtained.

9.4 Tank Sampling (Liquids and Sludges)

9.4.1 Obtain the capacity of tank from the facility representative.
9.4.2 Obtain the actual volume of material in the tank from facility representative. Confirm the volume by obtaining your own measurement or request the facility to gauge the tank while you observe.
9.4.3 Question the facility representative to determine whether the contents of the tank are a single phase or multi-phase material. If determined to be multi-phase, obtain volume of each phase from the facility representative or take your own measurements.

Note the condition of the tank, checking for leaks and structural defects. Note

the number and size of vent(s) on top of the tank. Note any deterioration or open hatches in the roof of the tank. Record all observations in field logbook or notes.

9.4.4 Liquid samples can be collected by using a tank sampler such as the bacon-bomb sampler or similar device. Sludge may be sampled using an Eckman or Ponar type dredge or a sludge judge.

9.4.5 Obtain sample from each phase and manage each as a separate sample. Note the exact depth at which each sample was taken in your logbook or notes. Collect a split sample at the same depth as each original sample.

9.4.6 When sampling a single or two-phase material it is customary to obtain a top, middle, and bottom sample of the liquid phase. These samples can be composited at the lab into one sample for analysis. Sludge samples would be managed separately.

9.5 Spill Sampling

9.5.1 The objective of sampling is to determine if a hazardous waste was released into the environment, not necessarily to determine how the resulting contaminated soil must be disposed. When available a sample should be taken of the material remaining in the vessel from which the spill occurred.

9.5.2 A composite sample consisting of several grabs throughout the spilled area may be obtained by utilizing an Encore-type sampler for volatile organic analysis and a soil tier, shovel, soil auger, or spoon for all other analysis. The sample should consist mainly of the spilled material and not much of the contaminated soil and debris. Record the number and location of each grab point in your field logbook or notes. A sketch or drawing of the area is recommended.

9.5.3 If the spilled material contains volatile constituents and has saturated into the surrounding soil, then a subsurface sample should be obtained from this area. For samples taken at a depth greater than 6 inches, a core sampler can be used to collect the media. Encore samples can be collected from the core plug. Encore samples must be collected immediately after collecting the core, so as to minimize the loss of volatile constituents. Sample depth is critical in order to eliminate dilution of the sample with non-contaminated media.

9.5.4 Samples collected for VOA and ignitability analysis should be disturbed as little as possible.

9.6 Waste Pile Sampling

9.6.1 The purpose of sampling is to determine if hazardous waste has been disposed in a waste pile and not necessarily to prove that the entire waste pile is a hazardous waste (unless the mixture and derived-from rule applies). Therefore, sample location selection should be based on what areas or media are most likely to be a hazardous waste and/or hazardous waste constituents.

9.6.2 A composite sample consisting of several grabs throughout the waste pile area may be obtained using an Encore-type sampler for volatile organic analysis and a soil tier, shovel, soil auger, or spoon for all other analysis. The sample should consist of mainly of suspected waste material and not much of the contaminated soil and debris.

9.6.3 Depending on size of the waste pile and variation of the types of material in the waste pile, it may be necessary to obtain more than one sample. Probing into the waste pile should be attempted in order to determine whether different materials are below the surface of the waste pile.

9.6.4 For samples taken at a depth greater than 6 inches, a core sampler can be used to collect the media. The Encore-type samples can be collected from the core plug. The Encore-type samples must be collected immediately after collecting the core, so as to minimize the lost of volatile constituents.

9.6.5 Samples collected for VOA and ignitability analysis should be disturbed as little as possible.

Note: VOC solids sampling procedures must follow the Solid Material Volatile Organic Compound Sampling to Totals Analysis SOP.

10.0 Field Quality Control Procedures

10.1 Equipment rinsate blanks

At a minimum, one rinsate blank should be taken for every 20 samples collected, per sample equipment. The first rinsate sample should be taken prior to taking a sample with that piece of equipment. A second rinsate blank shall be taken after the sampling is complete. Additional rinsate samples may be taken between the initial and ending rinsate samples if visual, olfactory or field screening techniques indicate the possibility of highly concentration areas of contamination exist. These additional rinsate sample(s) may be collected to demonstrate that hazardous constituents were not carried over during the sampling process.

10.2 Trip blank

Trip blanks are used when the samples will be analyzed for volatile organic contents. Trip blanks are used to determine contamination due to potential container or preservative contamination. The trip blank will consist of organic-free distilled water placed in two 40ml vials, preservatives added, and carried by the sampling team along with sample containers. Trip blanks are provided by laboratory services or will be prepared by the sampling team prior to sampling. The trip blanks are to be recorded on the chain of custody as a separate sample.

10.3 Field blanks

One field blank may be collected per sampling event. If rinsate samples are collected, then it may not be necessary to collect a field blank.

When possible, field blanks should be the same matrix as the material being collected.

10.4 Duplicate Samples/Replicate Samples

Duplicate samples are two samples collected of the exact same material. Sufficient volume of sampled material is collected at once. The sampled material may be mixed to ensure sample homogeneity.

Replicate samples are two samples collected of the exact same material but is not collected at once and is not mixed. Replicate samples should be collected instead of duplicate samples when analysis for volatile organics and/or ignitability are to be performed.

These samples will be handled and managed as two separate samples, assigning two separate sample ID numbers and noting two separate times of sampling. The inspector must note in his log notes which samples are duplicates. One duplicate sample should be collected of each matrix sampled. Collect one duplicate/replicate sample per sampling event or every twenty samples.

Do not inform the laboratory that you have submitted duplicate or replicate samples.

10.5 Matrix Spikes/Matrix Spikes Duplicates

Matrix spikes/matrix spikes duplicates (MS/MSD) samples are collected to verify the accuracy of the laboratory. You may request that the laboratory run MS/MSD analysis on your sample in addition to the normal random MS/MSD performed by the laboratory. In doing so, you will ensure that MS/MSD analysis will be performed on the same matrix as you sample. When requesting MS/MSD on your sample, additional volume of each sample matrix must be collected to include the analyses for MS/MSD.

NOTE: Some samples due to matrix interference and high levels of contamination may not be practical or even possible to perform matrix spikes on. For example an oily waste sample suspected of containing high levels of BTEX. In this case a duplicate sample can be taken to verify sample data accuracy. The lab can perform matrix spikes on another sample that most closely resembles this sample.

11.0 Sealing and Packaging of Samples

All samples should be sealed with evidence tape. This may be accomplished by placing a seal over the lid of the bottle or by placing the bottle in a zip-lock bag and wrapping the bag with evidence tape. All semi volatile and pesticide samples should have been collected in an amber bottle. If not, these samples should be wrapped in Aluminum foil. All VOA, semi volatile, and pesticide samples should be preserved with ice as soon as possible. It is acceptable to preserve metal samples with ice but not necessary. The samples must be cooled down to and maintained at 4^0C ± 2ºC. It is recommended to use an abundant supply of ice. Each ice chest should be sealed with evidence tape. If ice must be added to the ice chest at a later date, the ice chest should be re-sealed. Record this event in your field log notes and on the Chain of Custody. Samples suspected of containing high concentrations of volatile and semi volatile constituents should be packaged separately from your field blanks and rinsate blanks. One trip blank (two 40 ml vials) should be placed in each ice chest containing samples to be analyzed for VOA analysis. The trip blanks are obtained from the laboratory and will accompany the sample bottles at all times.

12.0 Chain of Custody

Use only the LDEQ's Chain of Custody (COC) form. The Chain of Custody form must be completed prior to leaving the site. Complete the Chain of Custody form and include the following:

12.1 Complete all the applicable information in the Sampler's Information section. The facility name is not written on the COC, but is noted in the field notes.

12.2 Record Sample ID numbers, making sure that the sample number on this COC is the same as the number on the sample container label, example:

167-010214-01 Sample taken on Feb. 14, 2001.

12.3 Record sample location if applicable. The information is usually noted in the field notes and in the inspection report.

12.4 Record date and time of each sample taken.

12.5 Record sample matrix: Water, Soil, Oil, or Sludge. If sample matrix is not adequately described by these terms, a description must be included in the Comment Section of the COC form.

12.6 Indicate the type of preservatives used during the sampling. See section 10.1 for the type and use of preservatives.

12.7 Note sample type: Grab or Composite.

12.8 Record total number of containers per sample.

12.9 Leave the Aliquots column blank. This column is not used during hazardous material/waste sampling.

12.10 Insert the type of analysis to be performed on the sample.

12.11 Fill in the Destination column with the name of the current contract laboratory or one of the other destinations listed.

- ***Note whether Split Samples were accepted and fill in the appropriate information.***
- ***Note any special instructions or conditions to the laboratory in the "Additional Comments" section***.

The Chain of Custody form must be free of errors. If an error is made it should be marked through with a single line, the correct information added, and then initialed and dated by the person making the change. Samples must remain under lock and key or within sight while in your possession. If an overnight courier is used, the courier's name (e.g., Fed X) and the air bill number must be recorded on the Chain of Custody document in the "Received By" section of the form. Sign and date the Chain of Custody form before releasing the samples. Attach a signed copy of the form with your report.

Note: All samples must be packaged, labeled, and marked according to DOTD regulations prior to shipping these samples with a commercial courier.

13.0 Split Samples

By law the LDEQ is required to provide split samples to the facility when requested. It is a good practice to make an offer to split samples and to inform the facility of this right. Note in your field logbook or notes that the facility representative accepted or rejected the offer of split samples. Be sure to obtain the facility representative's name and title. LDEQ is not required to provide sample bottles for the facility. When available it is best to provide the facility with sample bottles rather than delay the sampling while they are attempting to obtain their own bottles. Note in your field logbook or notes the condition, size, and type of

the sample bottles the facility utilizes. Also note how the facility manages its samples (i.e. - were the samples preserved on ice, etc.). *Sampling purpose and protocol should not be compromised in order to provide split samples.* Obtaining duplicate samples of material suspected of containing volatile constituents is preferred to placing a large volume of sample material in a bucket, stirring the contents, and then pouring the material into the sample bottles. To demonstrate complete fairness, allow the facility representative to select which sample of each set he wishes to take. In the event that there is not enough material to provide split samples, obtain enough material for your analyses. We can argue the facility's right to a split in this case, later.

14.0 Field Decontamination

Sampling equipment that has not been used recently or is not within a sealed container should be decontaminated prior to use. A rinsate sample should be taken prior to use. This is especially important when sampling for volatile constituents.

14.1 Decontamination procedure should include:
- 14.1.1 Hexane solvent wash
- 14.1.2 Soap wash
- 14.1.3 Deionized water rinse

Prepare an equipment staging station to reduce cross contamination of samples. The decontamination station should be lined with visqueen to prevent spillage on the ground. Decontamination should be thorough to ensure that the equipment is clean, however waste generation should be kept to a minimum. Contaminated sampling equipment may be placed in a container and decontaminated at the regional office.

15.0 Laboratory Instructions

Instruct the laboratory to run total analyses first and then to run TCLP only if any of the TCLP constituents are present in the total analyses at concentrations 20X above the regulatory limits. (Note: Total and TCLP analysis of a sample which is an aqueous solution containing less than 5% solids is the same result, therefore only the total analyses are required.) Instruct the laboratory to contact the lead sampler prior to dilution of any sample that will significantly elevate detection limits. Appropriate clean up procedures should be employed prior to any dilution. Dilution should be a last resort. The laboratory must perform analyses employing the Contract Laboratory Program (CLP) methods where applicable. Inform the Laboratory that all analyses must be performed and documented so the data will be legally defensible.

Instruct the laboratory to only analyze trip blanks, rinsate blanks, and field blanks if the analysis of the target material exceeds the regulatory limits or if the presence of listed

hazardous waste is detected.

There are no specific test methods for the testing of solids for ignitability and/or corrosivity. However, the laboratory can perform customized tests for solids based on the definition of ignitability and corrosivity. The laboratory can also perform a customized analysis for reactive waste based on the definition of reactivity. Otherwise, the analysis will be to determine the presence of cyanides and sulfides.

Instruct the laboratory to contact the lead sampler if any questions or anomalies should arise (e.g., discrepancies between sample container label and chain of custody form, inadequate sample volume, breakage, etc.). Specify each analysis desired and any special instructions on the Chain of Custody form.

16.0 Waste Management

Waste generated on-site may include:

- Contaminated personal protective clothing.
- Disposable sampling equipment.
- Decontamination wash water and residues.
- Contaminated paper towels, rags, etc.

Waste generated at the site must be placed in an appropriate container. The container should be marked with words which identify its contents (CONTAMINATED PPE, DECON WASTE, etc), the date accumulation began, and the appropriate waste codes if known. Waste generated as the result of sampling activities may be left at the facility. The facility representative must be instructed to manage the waste properly. You may have to remind the facility that waste generation is site specific. Under emergency conditions the waste may be returned to the regional office for safe handling and disposal.

If the site is abandoned, secure the containers by placing warning tape around them. Arrangements will have to be made for off-site disposal. Under emergency conditions the waste may be returned to the regional office for safe handling and disposal. Regional offices will be issued an EPA ID number as a small quantity generator. Waste disposal will be managed through a contract disposer.

Attachment 1

Department of Environmental Quality
Chain of Custody

STATE OF LOUISIANA	DEPARTMENT OF ENVIRONMENTAL QUALITY	LABORATORY SERVICES
	CHAIN OF CUSTODY	PAGE OF

Name:_____ID#_____

__

Address:_____

___

Location:_____

____

Parish:_____Team Leader:____

_____

Permit Number/Inspector's Log

Number:_____

Additional Team

Members:_____

List any Field Data Sheets that accompany the

sample_____

Office_____Org #_____Project

Code_____

Sample #/ Sampler I.D.	Location ID/ Outfall/ (Canister S.N.)	Date	Time	Sample Medium/Type	Methodology	Preservatives	Grab or Comp	# Containers	# Aliquots	Requested Analysis										Destination* AL, BL,RL, WL	Remarks (Priority, etc.)

ADDITIONAL COMMENTS'

Split Samples Accepted?_____ If yes,

Accepted By:

Name:_____

Signature:_____

Sample #(s):_____

Sample Number	Aliquot	Grab	Team	Witness Name/Signature	Title

CHAIN OF CUSTODY

Relinquished by:	Date	Time	Received By:

Recommended Sample Disposition:

Final Sample Disposition:

Date:

*AL=Air Lab, BL=Bioassay Lab, RL-Radiation Lab, WL=Water Lab